Journal of Veterinary and Animal Sciences. 26 (1995) 138-139

Short communication

CONGENITAL UMBILICAL DEFECTS WITH VISCERAL EVENTERATION - CASE REPORTS

Defect in the development of somatopleure and umbilicus may lead to various defects of the body walls, especially of their ventral median parts where final union of their right and left sides take place. One of these defects is eventeration of the abdominal viscera (Willis, 1962). The condition has been described as variable degrees of opening in ventral abdominal wall with herniation of organs and no other associated defects (Leipold and Dennis, 1980). A case of agenesis of anus and rectum with prolapse of colon through the umbilicus in a calf was reported by Nayar *et al.* (1993).

This paper presents two cases of congenital umbilical defects and eventeration of the abdominal viscera through the defects.

Case I

A day-old-female cross-bred calf was presented at the Department of Surgery (case No. 98/94-95) with the history that a large mass was present at the umbilicus at birth. On examination, the mass was found to contain abdominal visceral organs protruding through the umbilicus, under cover of serous membrane, attached to umbilicus.

Surgical correction was advised. The mass was cleaned with normal saline solution and wrapped in a sterile moist towel. The area around the umbilicus was prepared for aseptic surgery and painted with Tr. iodine.

The animal was controlled in dorsal recumbency and the area around the umbilicus was infiltrated with 2% solution of Lignocaine Hydrochloride. An one-inch long skin incision, extending anteriorly from the umbilicus was made through the skin, linea alba and parietal peritoneum, to widen the umbilical opening. The serous covering of the protruding mass was incised carefully. The mass consisted of loops of intestines, omentum and mesentery. The mass was gently replaced into the abdominal cavity. The membranous sac was trimmed close to the umbilicus to freshen the edges of the umbilical ring. The laparotomy wound including umbilical ring was closed with figure-of-eight sutures using monofilament nylon. The skin wound was sealed with Tr. Benzoin. Benzathine penicillin - 12 lakhs I.U. was administered i/m postoperatively.

Case II

A day-old male kid was presented to the Department of Surgery (Case No. 33/95) with presence of a mass at the umbilicus. The animal was examined and eventeration of loops of intestines and portions of stomach and liver through the umbilicus was noticed. The mass was covered by a serous membranes continuous with the umbilicus.

The mass was cleaned with normal saline solution and covered with a sterile moist towel. Surgery was performed under local infiltration anaesthesia using 2% solution Lignocaine Hydrochloride after preparing the site around the umbilicus for aseptic surgery and painting with Tr - iodine. The umbilical ring was widened through an incision on skin, subcutaneous tissue and linea alba; the membrane was incised and the intestines, liver and stomach were replaced into the abdominal cavity. The membranous sac was excised close to the umbilicus. The peritoneum and muscles were apposed in a simple continuous pattern with 3/0 silk. The skin wound

was closed with vertical mattress sutures using monofilament nylon. The wound was sealed with Tr - Benzoin. Ampicillin was administered orally (125 mg b.i.d) for three days postoperatively. A dose of tetanus toxoid was administered.

A defect resulting from faulty closure of the abdominal wall along its ventral midline has variously been called "exomphalos", "gastroschisis", abdominal fissure and eventeration of the abdominal Viscera (Willis, 1962).

Visceral eventeration is due to some factor including genetic factors operating at a very early stage of prenatal development on the abdominal wall, which closes by about the third month. (Arey, 1966). In the present cases where the per-umbilical abdominal wall has formed almost normally, the viscera protruding through the defect remained within a membranous sac that represented the body wall. Since the abdominal wall was formed fully except for the defect at the umbilicus, surgical reduction was possible and the defect could be corrected.

Summary

Two cases of congenital umbilical defects with visceral eventeration and its surgical treatment is reported.

Acknowledgement

The authors are thankful to Dr. K.N. Muralidharan Nayar, Professor and Head, Department of Surgery and the Dean, College of Veterinary and Animal Sciences, Mannuthy for the facilities praided.

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References

Arey, L.B. (1966). Developmental Anatomy 7th ed. W.B. Saunders company.

Leipold, H.W. and Dennis, S.M. (1980). Congenital defects affecting Bovine reproduction. Current Therapy in Theriogenology; diagnosis, treatment and prevention of reproductive diseases in animals. W.B. Saunders company, pp: 430

Nayar, S.R., Sarada Amma, T. and Balagopalan, T.P. (1993). Agenesis of anus and rectum associated with prolapse of colon in a calf - A case report - *J. Vet. Anim. Sci.* **24:** 80-82

Willis, R.A. (1962). The Borderland of ebryology and Pathology. Butterworths, London - 2nd Ed. pp: 288-289